

What is Claimed is:

CLMS 1-39

1. A peptide no more than 30 amino acids in length, comprising at least 15 contiguous amino acids selected from:

- GGEDGDTLSDPFYYNHGMD*
- (a) SEQ ID NO:1, wherein the tyrosine at position 7 must be present; 19 AA 326
- PYPNDYNDYAPEEGMSWY*
- (b) SEQ ID NO:2, wherein the tyrosines at positions 2 and 6 must be present; 12 AA 326
- GDYADY DGGYYTDM*
- (c) SEQ ID NO:3, wherein at least one of the tyrosines at positions 3, 10, 11, 15, 19 or 20 must be present; 15 AA 326
- NSIAGVAAAGDYADY DGGYYTDM*
- (d) SEQ ID NO:4, wherein at least one of the tyrosines at positions 12, 19, 20 or 21 must be present; 24 AA 325
- DVGPDWDNDY YD RSGRGVFD*
- (e) SEQ ID NO:5, wherein the tyrosine at position 11 must be present; and 21 AA 326
- RNPNYDENADYSTVYHYMD*
- (f) SEQ ID NO:6, wherein the tyrosine at position 5 must be present. 19 AA 326

2. The peptide of claim 1, wherein one or more tyrosines in said peptide are sulfated.
3. A polynucleotide comprising a coding sequence consisting of nucleotides encoding the peptide of claim 1.
4. The polynucleotide of claim 3, wherein said polynucleotide is an expression vector, comprising a promoter operably linked to said coding sequence.
5. A host cell transformed with the vector of claim 4.
6. A peptide consisting essentially of the amino acid sequence of SEQ ID NO:1.
7. The peptide of claim 6, wherein the tyrosine at position 7 in SEQ ID NO:1 is sulfated.
8. A polynucleotide comprising a coding sequence consisting of nucleotides encoding the peptide of claim 6.

I. 30 AA

II. NA

III. 6, 7 PRP SEQ 1

IV. 8-10 NA SEQ 1

V. 11, 12 PRP SEQ 2

VI. 13-15 NA ~ 2

9. The polynucleotide of claim 8, wherein said polynucleotide is an expression vector comprising a promoter operably linked to said coding sequence.
10. A host cell transformed with the vector of claim 9.
11. A peptide consisting essentially of the amino acid sequence of SEQ ID NO:2.
12. The peptide of claim 11, wherein the tyrosines at positions 2 and 6 in SEQ ID NO:2 are sulfated.
13. A polynucleotide comprising a coding sequence consisting of nucleotides encoding the peptide of claim 6.
14. The polynucleotide of claim 13, wherein said polynucleotide is an expression vector comprising a promoter operably linked to said coding sequence.
15. A host cell transformed with the polynucleotide of claim 13.
16. A peptide consisting essentially of the amino acid sequence of SEQ ID NO:3.
17. The peptide of claim 16, wherein at least one of the tyrosines at positions 3, 10, 11 or 12 of SEQ ID NO:3 are sulfated.
18. A polynucleotide comprising a coding sequence consisting of nucleotides encoding the peptide of claim 16.
19. The polynucleotide of claim 18, wherein said polynucleotide is an expression vector comprising a promoter operably linked to said coding sequence.
20. A host cell transformed with the polynucleotide of claim 19.

- X
21. A peptide consisting essentially of the amino acid sequence of SEQ ID NO:4.
22. The peptide of claim 21, wherein at least one of the tyrosines positions 12, 19, 20 or 21 of SEQ ID NO:4 are sulfated.
- X
23. A polynucleotide comprising a coding sequence consisting of nucleotides encoding the peptide of claim 21.
24. The polynucleotide of claim 23, wherein said polynucleotide is an expression vector comprising a promoter operably linked to said coding sequence.
25. A host cell transformed with the polynucleotide of claim 24.
26. A peptide consisting essentially of the amino acid sequence of SEQ ID NO:5.
- XI
27. The peptide of claim 26, wherein the tyrosine at position 11 of SEQ ID NO:5 is sulfated.
- XII
28. A polynucleotide comprising a coding sequence consisting of nucleotides encoding the peptide of claim 26.
29. The polynucleotide of claim 28, wherein said polynucleotide is an expression vector comprising a promoter operably linked to said coding sequence.
30. A host cell transformed with the polynucleotide of claim 29.
- XIII
31. A peptide consisting essentially of the amino acid sequence of SEQ ID NO:6.
32. The peptide of claim 31, wherein the tyrosine at position 5 of SEQ ID NO:6 is sulfated.
- XIV
33. A polynucleotide comprising a coding sequence consisting of nucleotides encoding the peptide of claim 31.

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~~III~~
~~IV~~
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~~VI~~
~~VII~~
~~VIII~~
~~IX~~
~~X~~
~~XI~~
~~XII~~

~~82~~

PICK ONE

~~701~~

39. The method of claim 38, wherein said antibody is sulfated *in vivo* in the presence of a sulfotransferase.

1-XLV UR

1, 3, 5, 7, 9, 11, 13 + xv plots / MU

2, 4, 6, 8, 10, 12, 14 + x^v B2R

1-15 + 16 on